

CLAIMS

1. A plating solution which contains ionic Fe,
ionic Pt, and a complex agent, at a molar ratio of
5 the ionic Fe to the ionic Pt ranging from 0.75 to 3.

2. The plating solution according to claim 1,
wherein the complex agent contains tartrate ions or
citrate ions.

3. The plating solution according to claim 1,
10 wherein the concentration of the ionic Fe ranges from
0.005 mol/L to 0.1 mol/L.

4 The plating solution according to claim 1,
wherein the plating solution has a pH ranging from
5.0 to 10.5.

15 5. The plating solution according to claim 1,
wherein the ionic Fe and the ionic Pt form a double
complex constituted of an Fe complex and a Pt complex.

6. The plating solution according to claim 1,
wherein the plating solution contains ionic Cu and a
20 complex agent for the ionic Cu.

7. A process for producing a structure
comprising steps of:
providing an electrode and an object to be plated in
a vessel containing a plating solution set forth in
25 any of claims 1 to 6, and
plating the object with a magnetic material
containing FePt from the plating solution by applying

voltage to the electrode to form a structure.

8. A process for producing a structure, wherein the structure formed in claim 7 is heat-treated further at a temperature ranging from 450°C to
5 750°C.

9. A process for producing a structure, wherein the structure set forth in claim 7 is heat-treated further in the presence of hydrogen.

10. The process for producing a structure according to claim 7, wherein the object to be plated is a structure having holes, and the step of plating the object to form the structure is deposition of the magnetic material containing FePt into the holes.

11. An apparatus, having a plating solution as
15 set forth in any of claims 1 to 6, a vessel for holding the plating solution, and electrodes, for conducting plating by application of a voltage to the electrodes.